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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/595,477

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Jens Uwe Brandt

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EXAMINER

FULLER, ROBERT EDWARD

ART UNIT

PAPER NUMBER

3676

NOTIFICATION DATE

DELIVERY MODE

02/11/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com
pto@gbpatent.com

Office Action Summary	Application No. 10/595,477	Applicant(s) BRANDT ET AL.	
	Examiner ROBERT E. FULLER	Art Unit 3676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 November 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. Applicant's submission, filed November 28, 2008, has been carefully considered.

Examiner has withdrawn the objection to the drawings set forth in the previous Office Action, and has also withdrawn the prior art rejections set forth in the previous Office Action. However, examiner has issued new prior art rejections, and has added a rejection under 35 U.S.C. 112. Therefore, this Office Action has not been made final.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 22-30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 22 recites "a suction line configured to discharge into a well," and a "feed line connecting the pressure chamber of the displacement pump with a high-pressure side of at least one ejector pump arranged on a suction side in a delivery direction of the displacement pump." This seems to be the reverse of the disclosure. The drawings show the suction line 10 as the line which feeds the displacement pump and the feed line 7 as the line which discharges into the well.

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Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 16 and 17 rejected under 35 U.S.C. 102(e) as being anticipated by Stark et al. (US 7,077,207).

With regard to claim 16, Stark discloses a method for delivering a multi-phase mixture from a well using a displacement pump (3) through which the multi-phase mixture is pumped, comprising, on a pressure side, splitting off a partial liquid flow from a main delivery flow (via separator 9) and guiding the split partial liquid flow to a high-pressure side of at least one ejector pump (7) arranged on a suction side of the displacement pump as an auxiliary delivery device.

With regard to claim 17, the ejector pump (7) is arranged in or on the well.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
7. Claims 18, 22, 23, 25, 26, and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stark et al. in view of Rohlfing (US 5,624,249).

With regard to claims 18 and 22, Stark discloses a pump installation comprising a displacement pump (3) for delivering multi-phase mixtures with a pump housing in which a pressure chamber is provided, at least one separation device (9) to divide a gas phase from a liquid phase in the pressure chamber, a suction line (15) configured to discharge into a well, and a feed line (13) connecting the pressure chamber of the displacement pump with a high-pressure side of at least one ejector pump arranged on a suction side in a delivery direction of the displacement pump and which guides the separated liquid phase to the ejector pump.

Stark discloses a separator which separates a liquid phase from a gas phase (see column 4, lines 19-23). However, Stark fails to disclose the separator being located within the displacement pump, as claimed in claims 18 and 22.

Rohlfing discloses a screw-type pump which is a combined displacement pump and separator.

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It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have combined the displacement pump and separator of Stark into a single housing, as shown by Rohlfing, since this would have simplified the construction of the pumping system, and further, since applicant admits that “displacement pumps and multi-phase pumps, including their pressure chambers and housings, and how they are operable to separate are well known in the art” (see page 8 of the Remarks filed November 28, 2008).

With regard to claim 23, the ejector pump (7) is arranged in a discharge area of the displacement pump (3).

With regard to claims 25 and 26, Stark does appear to disclose passing the fluid through the separator (9) twice (see Figure 1), however, Stark fails to disclose an additional separator. Even so, it would have been considered obvious to one of ordinary skill in the art, to have added an additional separator to the system of Stark, as this would have ensured that most or all of the gas was eliminated from the carrier liquid, and furthermore, because it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. Additionally, with regard to claim 26, if an additional separator were added to the system of Stark, one of ordinary skill would have sent the extracted gas to the same pipes which exit the separator (9), and these pipes are located on a pressure side of the pump.

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With regard to claim 28, in the combination of Stark and Rohlfing, the displacement pump is a screw pump, since Rohlfing discloses a screw pump/separator unit.

With regard to claim 29, the ejector pump (7) is arranged in the well.

With regard to claim 30, the ejector pump (7) is at an end of the suction line (15).

8. Claims 19 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stark in view of Rohlfing as applied to claims 16, 18, and 22 above, and further in view of Skinner et al. (US 4,066,123).

With regard to claims 19 and 24, Stark in view of Rohlfing fails to disclose a short-circuited line for recirculating fluid through the displacement pump unit.

Skinner discloses a pump/separator system (18, 20) for well production having a short-circuited line (23).

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have included a short-circuited line within the pump/separator system of Stark in view of Rohlfing, in order to have “improve[d] cleaning of the fluid” (see Skinner, column 2, line 19).

9. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stark et al.

Stark does appear to disclose passing the fluid through the separator (9) twice (see Figure 1), however, Stark fails to disclose an additional separator. Even so, it would have been considered obvious to one of ordinary skill in the art, to have added an additional separator to the system of Stark, as this would have ensured that most or all

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of the gas was eliminated from the carrier liquid, and furthermore, because it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

10. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stark et al. in view of Rivas (US 6,260,627).

Stark fails to disclose a booster pump.

Rivas discloses a wellbore production system comprising a main pump (14) and a booster pump (44).

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have added a further pump (i.e. a booster pump) to the assembly of Stark, in order to have compensated for head losses inherent in pumping fluids over long distances.

11. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stark et al. in view of Rohlfing as applied to claim 22 above, and further in view of Rivas.

Stark in view of Rohlfing fails to disclose a booster pump.

Rivas discloses a wellbore production system comprising a main pump (14) and a booster pump (44).

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have added a further pump (i.e. a booster pump) to the assembly of Stark in view of Rivas, in order to have compensated for head losses inherent in pumping fluids over long distances.

Response to Arguments

12. Applicant's arguments with respect to claims 16 and 22 have been considered but are moot in view of the new ground(s) of rejection.

Examiner notes, with respect to claims 19 and 24, that the 103 rejections of those claims employ the same teaching reference (Skinner et al.) as in the prior Office Action, but are based on a different base reference (Stark et al.). However, in response to applicant's arguments, examiner respectfully notes that Skinner is brought in merely to illustrate the principal of short-circuiting a pump and separator unit. Therefore, the location or arrangement of the pumps in Skinner does not matter, as Stark provides all of those necessary teachings. Applicant has argued against the Skinner reference as if it was applied under 35 U.S.C. 102.

Further, with regard to claims 21 and 27, applicant has argued that examiner merely relies on Rivas's teaching of a booster pump to reject these claims, and that Rivas does not disclose any of the features of the independent claims. Although examiner would argue that Rivas does teach at least a "method for delivering a multi-phase mixture from a well" and a "pump installation" as claimed in claims 16 and 22, examiner respectfully asserts that Rivas is applied under 35 U.S.C. 103, rather than 35 U.S.C. 102. Stark in view of Rohlfing provides all of the necessary elements other than the booster pump, and Rivas's teaching of a booster pump cures this deficiency, as the merits of booster pumps are well known, and are almost implicit in their name, as they "boost" pressure to compensate for head loss.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT E. FULLER whose telephone number is (571)272-0419. The examiner can normally be reached on Monday thru Friday from 8:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer H. Gay can be reached on 571-272-7029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Shane Bomar/
Primary Examiner, Art Unit 3676

02/05/2009
REF